



STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

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September 10, 2007

Mr. Orlando Monaco
Department of Navy
Base Realignment and Closure
Program Management Office-Northeast
4911 South Broad Street
Philadelphia, PA 19112-1303

Re: Site 9, Monitoring Event 29-September 2006
Naval Air Station, Brunswick, Maine

Dear Mr. Monaco:

Pursuant to Section VI of the Naval Air Station, Brunswick, Maine Federal Facility Agreement (Oct 1990), as amended, the Maine Department of Environmental Protection (MEDEP) has reviewed the draft "Site 9, Monitoring Event 29 Report, September 2006", dated July 2007, prepared by Environmental Chemical Corporation. Based on that review MEDEP has the following comments and issues.

General Comments:

1. With the exceptions of monitoring wells decommissioned by the removal of the ash landfill, the Navy is out of compliance with the Federal Facility Agreement (FFA) by not following the final Long Term Monitoring Plan (LTMP) (EA 2005) as required by the Record of Decision. MEDEP anticipates handling this unauthorized reduction of the LTMP with EPA and the Navy through dispute resolution for failure to comply with the FFA.
2. The reduction in sampling from omission and/or removal of the ash landfill severely limits the Navy in making conclusions on meeting the objectives of the Long Term Monitoring Plan or making findings or conclusions on the protectiveness of the remedy. Please add text to the finding and conclusions section referencing the data limitations.
3. The data collected are generally consistent with previous rounds, with low VOC detections at MW-NASB-074 and MW-NASB-075 and DRO detected at three wells near the impoundment ponds at the southern end of the site. The DRO detections all exceed the Maine MEG of 50 ug/L. MW-NASB-076 is the only remaining well where vinyl chloride has been detected in previous rounds, but that well was not sampled for VOCs this round.
4. The addition of the new monitoring well in the southwest corner of the Institutional Control (IC) Boundary will help define the nature and extent of VOCs previously detected in this area.

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Specific Comments:

5. Section 1.2, and Table 1-1: *"The Site 9 Long-Term Monitoring Plan (LTMP) (ECC and EA 2005) well designation..."*

The table summarizes the monitoring for this round (ME 29) but does not reflect the October 2005 LTMP Table 3-1. Please revise the text to reflect that the table describes ME 29 wells and analyses, as the table header indicates.

6. Section 1.2, Tables 1-1 and 1-2 and Figure 1-3:

- a.) *"Static water levels were measured ..."*

The text should reflect that the water elevations were not obtained at the two staff gauges, both of which were not functional. MEDEP reminds the Navy that in the RTCs for ME-27 the Navy's consultant stated that the stream gauges would be repaired or replaced in the Spring 2007. Please confirm that this has been done.

- b.) *"Five wells at Site 9 have been decommissioned ..."*

The text notes that MW-NASB-022 had a car parked over its location so no water level was obtained, however Table 1-2 lists the well as "destroyed". Please revise as needed.

- c.) *"The September 2006 water level gauging data were used to interpret the groundwater..."*

The potentiometric data on Figure 1-3 are outdated, please update to reflect the ME 29 data.

- d.) Table 1-1 does not reflect that MW-NASB-022 and MW-NASB-227 were gauged or scheduled to be gauged in ME2 9.

7. Section 1.4, Section 1.5 and Figure 2: *"The sample locations are shown on Figure 1-2..."*

The referenced figure does not show the surface water/sediment/seep locations. Please revise the figure or have the text refer to Figure 1-3.

8. Section 2.1: *"Results of the groundwater level and pond elevation gauging..."*

If pond elevation could not be taken due to broken staff gauges please revise the text and make note of the broken equipment and limited data.

9. Section 2.2: *"Although not required by the Final LTMP..."*

The 2005 LTMP Tables 3-1 and 3-2 do note that "Eh" will be measured as part of the field parameters. Though this is not the exact same measurement as Oxidation Reduction Potential (ORP), the intent to measure the relative oxidation potential of the groundwater and is required by the LTMP. Please remove the sentence permanently from the monitoring reports. The next revision of the LTMP should be revised to include ORP rather than Eh will be measured as a field parameter.

10. Section 2.2.1: MEDEP suggests that first part of this section needs to be revised with figures for specific wells in different portions of the site, rather than a single graphic. Detections at MW-NASB-069 (until decommissioned), MW-NASB-074, and MW-NASB-227 have been fairly frequent over the course of monitoring, and trends at different locations would better show how the contaminant distribution has changed. The figure included is misleading or is at least not a good representation, as nearly all the vinyl chloride is from MW-NASB-069, while cis-1,2 DCE is found in wells across the site. The declines for the last few rounds are deceptive due to LTMP omissions and decommissioned wells.

11. Section 2.2.1 paragraph 4 page 2-2: *"Detections of vinyl chloride in direct-push samples S9-B8 in 2003..."*

MEDEP concurs that it appears there are discharge pathways in this vicinity that are not currently monitored. When the monitoring network is revised following the ash excavation and the direct-push investigation south of Neptune Drive, new monitoring well locations must be considered.

12. Section 2.2.1 paragraph 5 page 2-3: *"Vinyl chloride was detected at 7.1 ug/L in S9-B8..."*

The text should also note that the January 2006 sampling did detect vinyl chloride (1.2 µg/L at MW-NASB-076), and the supplemental report should be added as a reference in the text. Also please renumber and update figure 2-1/1-4 and then reference it in this report.

13. Section 2.2.1 paragraph 6 page 2-3: *"Action items from the December 2004 Technical Meeting..."*

There appears to be a disconnection in the text. The initial statements refer to the data gap in groundwater monitoring at depth near MW-NASB-076. The well installed in the southwest corner was installed to evaluate VOCs detected in S9-B7, S9-B10 and S9-B11. MEDEP supports installing a new well or wells to target the groundwater at depth near MW-NASB-076, please make this well installation an action item pending completion of the direct-push program south of Neptune Drive.

14. Section 2.2.1 September 2006 bulleted results and Table 2-1: The DRO detections at MW-NASB-074 and MW-NASB-075 must be added to the text summary. The TVOC value for MW-NASB-074 has "double-counted" the cis-1,2 DCE result, please revise the table.

15. Section 3.1 Objective # 1: *"Monitor changes in the plume boundaries and potential migration pathways."*

As noted several times in the text and in the Recommendations section, direct-push data indicate that not all discharge pathways are currently monitored. When the well installation is being planned, a small number of pore water samples for VOCs along the un-named tributary that flows into the lower impoundment pond may help define the optimum location to meet this objective.

16. Section 3.1 Objective 2: *"Monitor effectiveness of the remedial action ..."*

This objective is not fully met based on the data gaps and LTMP omissions, however the institutional controls do appear to be protective of human health at present. The planned new locations and investigations will improve the ability to determine if this objective is being met.

17. Section 3.1 Objective 3: "Evaluate whether the inactive landfill contents are impacting groundwater."

A statement must be added to reflect that the last sample collected from MW-NASB-069 for VOCs did contain vinyl chloride in excess of the MEG/MCL and that achieving this objective will be limited for the near future by the lack of monitoring and data gaps currently identified.

18. Section 3.1 Objective 4: "Monitor the VOC contamination to evaluate the effectiveness of natural attenuation and determine trends with time."


Until the identified data gaps to the southwest and at depth near MW-NASB-076 are filled, this objective will not be completely met. Also the reduced number of locations analyzed for VOCs tend to provide misleading declines and limit the conclusions about the VOC distribution in site groundwater. A qualifying statement addressing the limitations of the current monitoring network is required here.

19. Section 3.2 Conclusions and Recommendations: MEDEP agrees that a new location is needed to assess VOCs in groundwater at depth near MW-NASB-076. However, MEDEP will not agree to drop the current well from the LTMP until the proposed direct-push investigation is completed and monitoring indicates that the location is no longer needed. Specifically, recent monitoring indicates that vinyl chloride and DRO exceed Maine MEGs, and the location should be retained until it is demonstrated that a deeper screen will provide better data.

19. Appendix D: For several or all of the VOC trend graphs including MW-NASB-022, MW-NASB-227, MW-NASB-076, MW-NASB-074 and others, the total VOC plot frequently is much higher than the sum of the plotted VOCs, and many of the plotted parameters are not observed at Site 9 in recent monitoring. Please remove 1,1 dichloroethane, toluene, and trans-1,2 dichloroethene from the plots and add frequently detected parameters or compounds of concern such as cis- or total 1,2 dichloroethene (DCE), trichlorofluoromethane, 2-butanone, or tetrachloroethene.

Please contact me at (207) 287-7713 or claudia.b.sait@maine.gov, if you have any questions or comments.

Respectfully,



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